

MIDLAND METROLOGY LIMITED

uRocky-DN

Dolphin Nose Rockwell Hardness Tester



Product Feature & Application

Product Features

Extended horizontal indenter can test the parts that are unable to be measured by general hardness testers such as ring and tube with the minimum test inner diameter of 25mm.

Closed loop control system. High precision load cell instead of dead weights working directly after connecting with electric power.

Touch screen for user to directly select the hardness scale, test force, dwell time etc.

Semi automatic type, initial test force loads manually, main test force loads by motor (loading- dwell - unload automatically). Greatly improved working efficiency).

Rockwell hardness scales HRA, HRB, HRC etc and high resolution to 0.1HR.

Automatic correction of high, medium and low hardness on touch screen.

Automatic correction of load, with force accuracy increased by dynamometer.

Automatically applies the initial test force and the main test force.

Automatic testing process: loading- dwell - unloading and automatically displays hardness value.

Curve display: test force, displacement depth change curve, real time test force value curve.

Powerful data processing function, including HR, HB, HV and other hardness scale conversion.

Qualified range can be set, automatic alarm will sound when over the limit. Testers name, sample name and other information can be inputted.

Operator can set up password for the machine to protect setup parameters. Safely keeps test information and set parameters.

With USB interface, test data can be saved in U-flash directly in EXCEL format making it easy to edit and process.

Modular designed machine with easy maintenance.



uRock-150DN



uRock-45DN



uRock-150/45DN

Product Application

- Industrial production, inspection of product quality on processing technology. Ferrous and nonferrous metals, hardened steel, tempered steel, annealed steel, sheet of various thicknesses, carbide materials, powder metallurgy materials, hardness and thermal spray coating.
- Dolphin Nose Indenter (Nose mounted indenter) allows access to awkward to reach test points:
 - 1) Ring shape material
 - 2) Tubular material
 - 3) Screw corner
 - 4) Bearing corner, etc.



Operation Interface

Tester Product Name

Radius of Curvature Acceptable Range to

Hardness Type Conversion Type

Dwell Time Conversion Value

Hardness Value Displacement Initiation

Main Interface

Calibration

Scale

Low Middle High

Standard

Measured

Hardness Calibration

Force Calibration

Standard: kg

Measured: kg

Force Calibration

Measurement Scale

<input type="button" value="HR15N/D"/>	<input type="button" value="HR30N/D"/>	<input type="button" value="HR45N/D"/>
<input type="button" value="HR15T/1.588"/>	<input type="button" value="HR30T/1.588"/>	<input type="button" value="HR45T/1.588"/>
<input type="button" value="HR15W/3.175"/>	<input type="button" value="HR30W/3.175"/>	<input type="button" value="HR45W/3.175"/>
<input type="button" value="HR15X/6.35"/>	<input type="button" value="HR30X/6.35"/>	<input type="button" value="HR45X/6.35"/>
<input type="button" value="HR15Y/12.7"/>	<input type="button" value="HR30Y/12.7"/>	<input type="button" value="HR45Y/12.7"/>

Please choose the right indenter for the scale you choosed.
Explanation

Scale/Force/Indentor Scale/Force/Indentor

uRocky-150DN

Measurement Scale

<input type="button" value="Calibration"/>	<input type="button" value="HRB/100/1.588"/>	<input type="button" value="HRC/150/D"/>	<input type="button" value="HRD/100/D"/>
<input type="button" value="HRE/100/3.175"/>	<input type="button" value="HRF/60/1.588"/>	<input type="button" value="HRG/150/1.588"/>	<input type="button" value="HRH/60/3.175"/>
<input type="button" value="HRK/150/3.175"/>	<input type="button" value="HRL/60/6.35"/>	<input type="button" value="HRM/100/6.35"/>	<input type="button" value="HRP/150/6.35"/>
<input type="button" value="HRR/60/12.7"/>	<input type="button" value="HRS/100/12.7"/>	<input type="button" value="HRV/150/12.7"/>	

Please choose the right indenter for the scale you choosed.
Explanation

Scale/Force/Indentor

uRock-45DN

Measurement Scale

<input type="button" value="Calibration"/>	<input type="button" value="HRB/100/1.588"/>	<input type="button" value="HRC/150/D"/>	<input type="button" value="HRD/100/D"/>
<input type="button" value="HRE/100/3.175"/>	<input type="button" value="HRF/60/1.588"/>	<input type="button" value="HRG/150/1.588"/>	<input type="button" value="HRH/60/3.175"/>
<input type="button" value="HRK/150/3.175"/>	<input type="button" value="HRL/60/6.35"/>	<input type="button" value="HRM/100/6.35"/>	<input type="button" value="HRP/150/6.35"/>
<input type="button" value="HRR/60/12.7"/>	<input type="button" value="HRS/100/12.7"/>	<input type="button" value="HRV/150/12.7"/>	

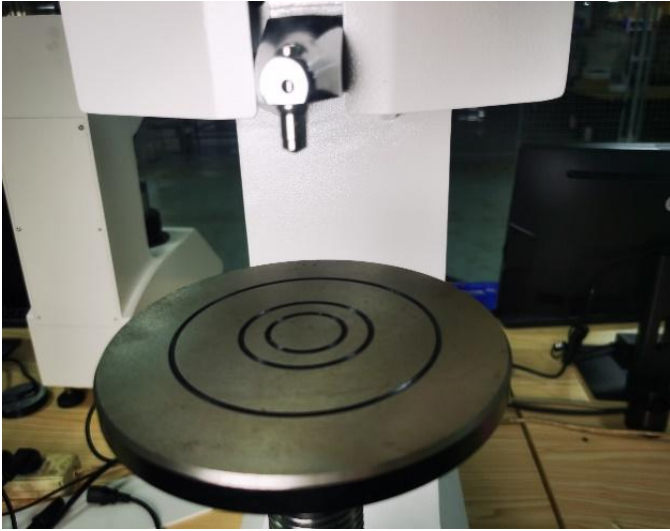
<input type="button" value="HR15N/D"/>	<input type="button" value="HR30N/D"/>	<input type="button" value="HR45N/D"/>
<input type="button" value="HR15T/1.588"/>	<input type="button" value="HR30T/1.588"/>	<input type="button" value="HR45T/1.588"/>
<input type="button" value="HR15W/3.175"/>	<input type="button" value="HR30W/3.175"/>	<input type="button" value="HR45W/3.175"/>
<input type="button" value="HR15X/6.35"/>	<input type="button" value="HR30X/6.35"/>	<input type="button" value="HR45X/6.35"/>
<input type="button" value="HR15Y/12.7"/>	<input type="button" value="HR30Y/12.7"/>	<input type="button" value="HR45Y/12.7"/>

Please choose the right indenter for the scale you choosed.
Explanation

Scale/Force/Indentor Scale/Force/Indentor

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Detailed Photos



Data Output



USB Interface



USB Interface

Machine Real Photo at Factory



Ordering Information



uRock-150DN Dolphin Nose Rockwell Hardness Tester
uRock-45DN Dolphin Nose Superficial Rockwell Hardness Tester
uRock-150/45DN Dolphin Nose Twin Rockwell Hardness Tester

Technical Specification

Model	uRock-150DN	uRock-45DN	uRock-150/45DN
Product Name	Dolphin Nose Rockwell Hardness Tester	Dolphin Nose Superficial Rockwell Hardness Tester	Dolphin Nose Twin Rockwell Hardness Tester
Initial Test force (error < 0.5%)	10Kgf(98.07N)	3.0kgf(29.4N)	Rockwell: 10Kgf(98.07N) Superficial Rockwell: 3.0kgf(29.4N)
Total Test force (error < 0.5%)	60kgf(588N) 100kgf(980N) 150kgf(1471N)	15kgf (147.1N) 30kgf (294.2N) 45kgf (441.3N)	Rockwell: 60kgf(588N) 100kgf(980N) 150kgf(1471N) Superficial Rockwell: 15kgf (147.1N) 30kgf (294.2N) 45kgf (441.3N)
Hardness Scale	HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK, HRL, HRM, HRR, HRP, HRS, HRV	15N, 15T, 15W, 15X, 15Y, 30N, 30T, 30W, 30X, 30Y, 45N, 45T, 45W, 45X, 45Y	Rockwell: HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK, HRL, HRM, HRR, HRP, HRS, HRV Superficial Rockwell: 15N, 15T, 15W, 15X, 15Y, 30N, 30T, 30W, 30X, 30Y, 45N, 45T, 45W, 45X, 45Y
Conversion Scale	HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T		
Hardness Range	HRA:20-88, HRB:20-100, HRC:20-70, HRD:40-77, HRE:70-100, HRF:60-100, HRG:30-94, HRH:80-100, HRK:40-100, HRL:100-120, HRM:85-115, HRR:114-125	HR15N: 70-94, HR30N: 42-86, HR45N: 20-77, HR15T: 67-93, HR30T: 29-82, HR45T: 10-72	Rockwell: HRA:20-88, HRB:20-100, HRC:20-70, HRD:40-77, HRE:70-100, HRF:60-100, HRG:30-94, HRH:80-100, HRK:40-100, HRL:100-120, HRM:85-115, HRR:114-125 Superficial Rockwell: HR15N: 70-94, HR30N: 42-86, HR45N: 20-77, HR15T: 67-93, HR30T: 29-82, HR45T: 10-72
Executive Standards	BSEN 6508, ISO 6508, ASTM E18, GB/T230		
Dwell time	0-99s		
Hardness resolution	0.1 HR		
Data Display	Touch LCD		
Data Save	The measured values are saved on USB flash drive in Excel format		
Test Height	300mm		
Test Throat	250mm		
Machine Dimension	720 x 260 x 840 mm		
Net Weight	80kg		
Power Supply	AC220 + 5%, 50 ~ 60 hz		

Packing List

uRock-150DN

Item	Qty	Item	Qty
Diamond Rockwell Indentor	1	Diameter 1.5875mm ball head	1
Regulating Screw	4	150mm Test Anvil	1
HRC High Hardness Block	1	55mm Test Anvil	1
HRC Low Hardness Block	1	40mm V-shaped Test Anvil	1
HRB Hardness Block	1	USB Flash Disk	1
Power Line	1	Touch Pen	1
Product Certificate	1 copy	Instruction Manual	1 copy
2A Fuse	2	Dust-proof Plastic Cover	1

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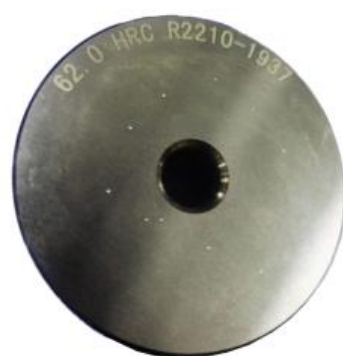
Item	Qty	Item	Qty
Diamond Rockwell Indenter	1	1.5875 mm Ball Indenter	1
Regulating Screw	4	150mm Test Anvil	1
HR15N Hardness Block	1	55mm Test Anvil	1
HR30N Hardness Block	1	40mm V-type Test Anvil	1
HR30T Hardness Block	1	Dust-proof Plastic Cover	1
Power Line	1	Instruction Manual	1 Copy
USB Flash Disk	1	Product Certificate	1 Copy
Touch Pen	1	2A Fuse	2

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Item	Qty	Item	Qty
Diamond Rockwell Indentor	1	1.5875mm Ball Indentor	1
Regulating Screw	4	150mm Test Anvil	1
Hardness Block (HRC high and low, HRB)	3	55mm Test Anvil	1
Hardness Block (HR15, HR30N, HR30T)	3	40mm V-type Test Anvil	1
2A Fuse	2	V-shaped Test Anvil	1
USB Flash Disk,	1	Dust-proof Plastic Cover	1
Power Line	1	Product Certificate	1
Touch Pen	1	Instruction Manual	1



HRB Hardness Block



HRC Hardness Block(High)



HRC Hardness Block(Low)



150mm Flat Test Anvil



55mm Flat Test Anvil



40mm V-shape Test Anvil



Superficial Rockwell Block



USB Flash Disk



Touch Pen